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To Formulate and Evaluate Aloe-Vera Face Wash

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Abstract: ***Natural remedies are more acceptable in the belief that they are safter with fewer side effects than the synthetic ones. Herbal formulation have growing demand in the world market. The present work deals with the development and evaluation of herbal face wash containing aloe Vera, Rose water, glycerin, soap base almond oil, raw honey peppermint oil etc. Although various topical herbal formulation for acne are available in the market, we purpose to make herbal formulation without using any synthetic ingredient. It was very good attempt to establish the herbal face wash containing aloe Vera.***
Keyword: Aloe Vera, peppermint oil, glycerin, face wash etc.

I. INTRODUCTION

Face wash refers to products that clean the face without drying it out. "Cleanser" is another name for face wash. Face wash has been determined to be suitable for all skin types. Face wash is particularly effective in removing dirt, oil, and moisture from dry skin. Face washes and cleansers are both used to remove grime, oil, and pollution from your face. A cleanser removes excess oil, makeup, and filth from the skin. These are contaminants that are oil soluble. They can also be removed with a face wash, though this may not be completely successful. Ordinary soaps can dehydrate facial skin, which is quite fragile. A face wash is a gentle cleaner that gets the job done. without causing irritation to the skin As a result, the skin seems youthful and active. The objective of a face wash could be to provide cleansing, anti-wrinkle, anti-acne, moisturising, and skin fairness. Skin whitening products are thought to affect the synthesis and metabolism of melanin in the skin by suppressing melanin production in melanocytes and hereby reducing the amount of melanin present. Aloe vera, rose water, Raw honey, peppermint oil, lavender essential oil, soap base, and glycerol are examples of agents that suppress melanin synthesis

A. Definition of Face Wash

A cleanser is a facial care solution that removes makeup, dead skin cells, oil, grime, and other impurities from the face's skin. This aids in pore unclogging and acne prevention. In addition to toner and moisturiser, a cleanser can be used as part of a skin care routine.

B. Advantages of Face Wash

- It aids in the removal of dead skin cells, allowing new skin cells to take their place.
- It keeps skin looking young and healthy.
- It gives the skin a healthy glow.
- By removing dead skin cells, you might expect your skin to age more slowly.[1]

C. Properties of Face Wash

- Exfoliation stimulates skin regeneration and renewal by increasing blood circulation.
- It must be both stable and attractive.
- When applied to the skin, it should soften.
- It should be able to spread without dragging.
- It should not feel oily or greasy while being applied.

II. METHOD OF PREPARATION

A. Collection

Aloe Vera gel, Rose water, peppermint oil, almond oil, glycerin and soap base are purchased from the local market.

B. Preparation Herbal Extract

Herbal extract can be prepared by method by using rose water assolvent. Desired quantities of the herbal drug were weighed and each herb was macerated with rose water in conical flask for 3 days seperately After 3 day, content were filter out by using a simple filtration method and filtrate were collected in vessel seperately.

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C. Filtration

Extract were filtered using simple filter paper and funnel for two times.

D. Development of Formulation

Desired quantities ofaloeVera gel and raw honey mixture by stirring together with the desired quantity of herbal extract were added peppermint oil and almond oil.To this add a few ml of glycerin and soap base in order to obtain accurate consistenc. Then the prepered formulation were filtered in a suitable container and labelling.

III. INGREDIENTS

1) Aloe vera
2) Rose water
3) Raw honey
4) Alomand
5) peppermint oil
6) Glycerin
7) Soap base

IV. INGREDIENT USED IN FORMULATION

A. Aloe Vera

1) Scientific name: Aloe vera.
2) Order: Asparagales.
3) Family: Asphodelaceae.
4) Subfamilly: Asphodeloideae.
5) Kingdom: Plantae.
6) Family: Asphodelaceae.
7) Botanical name: Aloe barbadensis miller.
8) Using aloe vera on the face has benefits because
a) Its anti-inflammatory effects help to relieve pain, swelling, and soreness in wounds and injuries, and it promotes collagen formation and release.
b) It can shorten the time it takes for Trusted Source wounds to heal and reduce scarring.
c) It shortens the time it takes for first- and second-degree burns to recover.
d) It works to treat bacterial and fungal diseases trusted source.
e) The cream residue should not become thick once the water has evaporated.
f) Rather than absorption, its physical action should be that of skin flushing and pore opening.
g) After usage, a thin emollient layer should remain on the skin.



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h) It has an antioxidant impact that can aid in the repair of UV damage and the slowing down of the skin's ageing process.
i) It guards the skin against the harmful effects of radiation therapy.
j) It contains 98 percent water, which moisturises, soothes, and hydrates the skin.
k) It makes the skin more flexible and supple, rather than stiff and leathery.
l) It relieves rashes and sunburns by cooling them down.

Contents Aloe vera
Vitamins, enzymes, minerals, carbohydrates, lignin, saponins, salicylic acids, and amino acids are among the 75 potentially active ingredients found in aloe vera. Vitamins: It contains antioxidant vitamins A (beta-carotene), C, and E. Vitamin B12, folic acid, and choline are also present.

B. Rose Water
Benefits OF Rose water for Your Face
1) It balances skin's natural oils: Rose water is known for its ability to clarify and balance your skin's natural oils, resulting in a renewed, revitalised appearance.
2) It can help reduce the appearance of temporary redness: If you have some redness on your skin, rose water can actually help to reduce the appearance of it — as well as any associated discomfort. It's an excellent way to refresh and soothe your skin.
3) It naturally hydrates: For youthful, glowing skin, moisture is essential, and rose water is a natural hydrator. It gives your skin an instant boost and replenishes moisture.
4) It has antioxidant properties that nourish and protect the skin: Rose water has been used for a variety of purposes since the 7th century and is high in antioxidants, which provide your skin with the nutrients it requires!
5) It can help prevent fine lines and wrinkles and reduce the appearance of those that already exist: Rose water is well-known for its anti-aging properties. It can fill fine wrinkles temporarily and possibly prevent new ones from forming.
6) It can help to unclog pores and create a smoother looking appearance: When your pores become clogged with daily debris and toxins, rose water can help to decongest them and clear impurities for a fresh, bright face.
7) It reduces the appearance of large pores: Speaking of large pores, rose water can actually help to reduce their appearance. It has cleaning, clarifying, and balancing qualities.
8) It can temporarily tighten skin: Rose water can temporarily tighten the look of your skin, giving you a firm, plump appearance, thanks to its toning properties. Smooth as silk!
9) It helps to remove impurities and prepare your skin for success: Rose water can help to remove impurities and prepare your skin for success. It cleanses and hydrates the skin, making it a great addition to any natural skin care routine.[4]

Contents of rose water
Rose water is high in vitamins A, C, E, and B, as well as anti-inflammatory properties.



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C. Raw Honey

Benefits of Raw Honey for Skin and Face

1) Deeply hydrates the skin
2) It cleans the pores.
3) Lightens Scars
4) Gentle Exfoliator
5) Helps with sunburn
6) Prevents acne and pimples
7) Adds a Natural Glow
8) Reverses Age
9) Hydrates the Skin
10) Assists in Wrinkle Reduction
11) Brightens the Skin Complexion

Contains

Honey is primarily sugar, with some amino acids, vitamins, minerals, iron, zinc, and antioxidants thRawn in for good measure. Honey is utilised as an anti-inflammatory, antioxidant, and antibacterial agent in addition to being a natural sweetener.[5]



D. Almond Oil

Glycerin Benefits For Your Skin

1) Hydrate the stratum corneum of the skin.
2) Improve the skin barrier function.
3) Provide anti-irritant protection for the skin.
4) Increase the speed with which wounds heal.
5) Eliminate dry skin.
6) May be beneficial for psoriasis.

Content of glycerin

Glycerin is a natural chemical generated from vegetable oils or animal fats. It's a sweet-tasting liquid that's transparent, colourless.



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E. Peppermint oil

Benefits of using peppermint oil for skin

1) It revitalises the skin: Adding peppermint essential oil to any skin care recipe helps your skin feel renewed, invigorated, and alive.
2) It lowers pimples: Peppermint essential oil's antimicrobial and antiseptic properties aid in the reduction of pimples and lesions such as papules, pustules, nodules, cysts, and active comedones.
3) It cools the skin and scalp: Peppermint essential oil is used in skin care products to create a cooling feeling and decrease the effects of sunburn or prolonged sun exposure.
4) It increases blood circulation and skin tone by using oils or serums packed with organic peppermint essential oil for face and body on a regular basis.
5) It eliminates germs and odour: Peppermint oil's antibacterial capabilities keep skin and scalp clear of congestion and make them smell fresh and minty by eliminating bacteria and odour.
6) It reduces sebum: Peppermint oil in face masks and cleansers helps oily, combination, and acne-prone skin regulate sebum production and distribution.
7) It is astringent in nature: Peppermint oil is naturally astringent. It improves the appearance of pores by contracting skin cells. It also prevents clogging or congestion of the pores.
8) It reduces indigestion: relieves indigestion Menthol in peppermint oil reduces acidity, soothes the stomach, and aids digestion, resulting in a healthier gut and clearer skin.[7]

Content of peppermint oil

Menthone and menthol are the two primary chemical components of peppermint oil.



F. Glycerin

Glycerin Benefits For Your Skin

1) Hydrate the stratum corneum of the skin.
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Content of glycerin

Glycerin is a natural chemical generated from vegetable oils or animal fats. It's a sweet-tasting liquid that's transparent, colourless.



G. Soap Base

Base material of soap base

1) Foaming agent
2) Cleansing agent
3) Expedient.

The basic ingredients of soap bace

a) Vegetable oil.
b) 100 percent pure lye.
c) Distilled water.
d) Essential or skin-safe fragrance oils (optional)
e) Colorants



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V. FORMULATION OF FACE WASH

Sr.No.	Ingredient.	Quantity
1.	Alove Vera	3 gm
2.	Rose Water	1 ml
3.	Peppermint Oil	1 ml
4.	Almond oil.	1 ml
5.	Glycerin.	2 ml
6.	Soap Base.	2 gm



VI. EVALUATION TEST FOR FACE WASH

In Vitro Evolution

1) *Rheological Characteristic:* We were studied for some physical properties colour, clogging, viscosity change and sensation test.
2) *Determination of pH:* The pH of formulations was determined using digital pH meter. One gram of face wash was dissolved in 100 ml of demineralised and stored for two hours. The measurements of pH of each formulation were done in triplicate. Instrument was calibrated before use with standard buffer solutions at pH 4
3) *Determination of Viscosity:* 100 gm of each of formulation was weighed and transferred to beaker. The help of Brook field viscometer (LV viscometer), spindle no 3 at 10 rpm for 5 min. Before measurement declaration of face wash was done and the face wash was filled in appropriate viscosity of formulations were determined with the Wide mouth container. Samples of the face wash were allowed to settle over 30 min at the assay temperature (25 ±l'C) bcfore the measurements. Viscosity of formulation was determined using the formula. Viscosity (cp) = Dial Reading x Factor
4) *Spreadability:* Spreadability determination of formulations was determined by an apparatus suggested by Multimer et al. which was fabricated in laboratory & used for study. The apparatus consists of a wooden block with a fixed glass slide with one end tied to weight pan rolled on the pulley which was in horizontal level with fixed slide. An excess of whitening face wash sample 1.5 gm was placed between two glass slide and a 1000 gm weight was placed on slide for 5 minutes to between compress the sample to uniform thickness weight (60gm) was added to the pan. It was calculated using the formula; S= ml /t Where, s= spreadability in gm.cm/sec m= weight tied to upper slide 1= length of glass slide t= time in seconds Length of glass slide was 11.2 cm and weight tied to upper slide was (60gm) throughout the experiment.
5) *Washability:* The product was applied on hand and was observed under running water.
6) *Stability Study:* The instant whitening face wash were also subjected to the following condition of temperature and relative humidity during stabilitk agies fiti serinentm temperature.

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VII. WASHBLITY TEST

In Vivo Evolution Test

1) Skin irritation test: The skin irritation was carried out on human volunteers. For formulated face wash volunteer were selected and 1.0 g of formulated face wash was applied on an area of two square inch to the back of the hand. The volunteers were not observed for lesions or irritation.
2) Photographic evaluation: This was carried out on volunteer. Whitening face wash was applied on skin. The photographs were taken before and after application of the product.



Observation Table

Sr.No.	Physical Parameters	Inference
1	Color	Slightly Green
2	Odour	Pleasant
3	Apperance	Trianslucent
4	Feel On Application	Smooth and slipper
5	PH	6.5

VIII. THE ANATOMY OF SKIN

A. *The Epidermis*

1) The epidermis is the skin's outer layer, and it serves as the body's first line of protection against bacteria, viruses, and even the outside world. But there isn't just one layer! The epidermis is actually made up of four thinner layers to cover all of its functions:
2) The stratum corneum is the topmost layer, and its thickness varies depending on where it is on the body (which is why, say, the skin on your heel is much thicker than that of your eyelid).
3) The stratum granulosum is the next layer. The cells in this area generate a waxy substance that keeps your skin dry.
4) The stratum spinosum follows, which is made up of cells that act as glue for your skin cells, binding other cells together.
5) The stratum basale is the epidermis' lowest layer. It contains stem cells, which divide to generate new skin cells. These are then pushed to the surface of the skin.

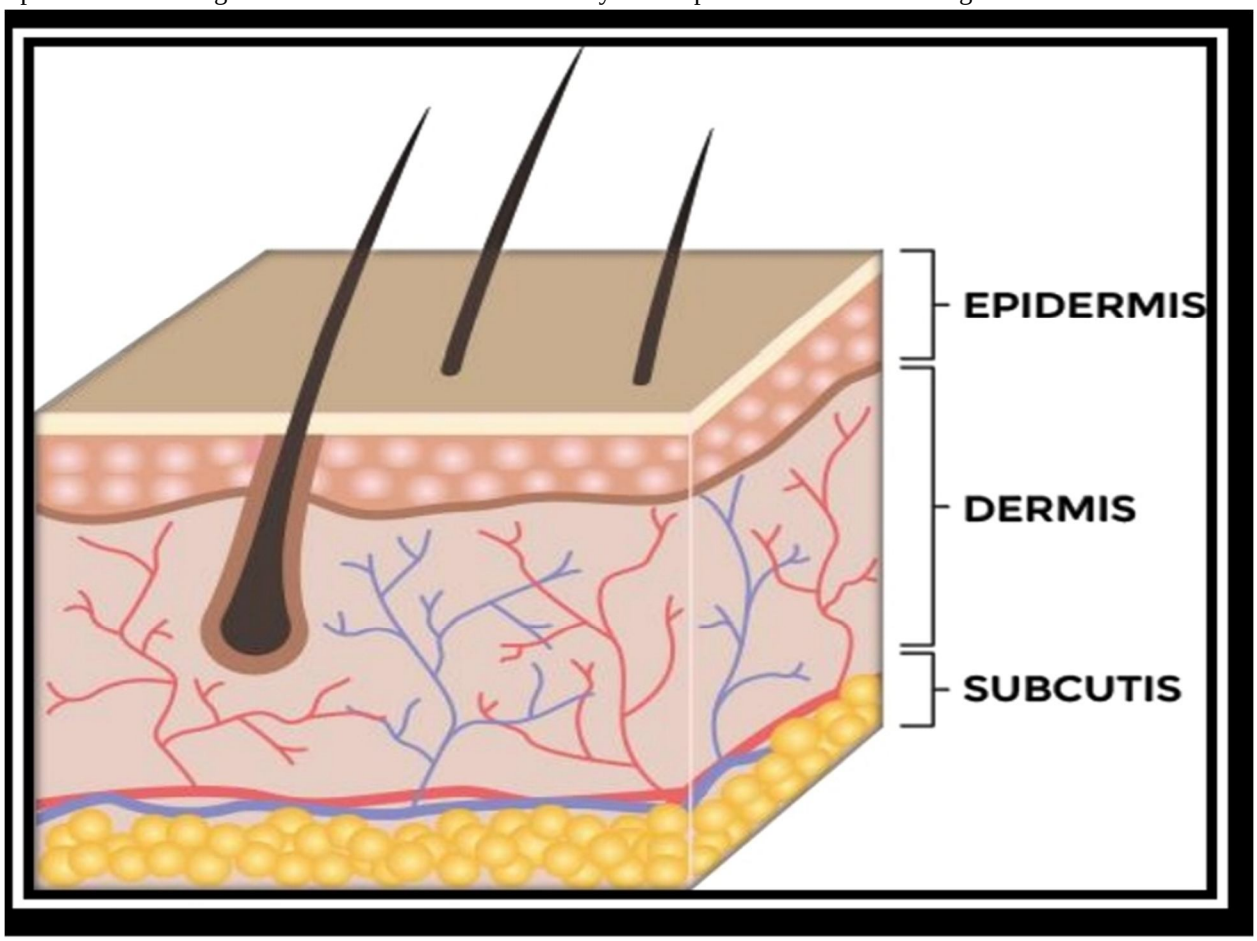
B. *The Dermis*

1) Much of the magic happens in the dermis—at least in the skin. The majority of the dermis is made up of collagen and elastin, as well as fibroblasts (the type of cell that creates the collagen and elastic tissue). This layer has several functions:
2) Blood and lymph vessels are found in the dermis layer and are responsible for giving nutrients to your skin as well as removing waste or toxins.
3) The sweat glands are found in the dermis. They produce perspiration through your pores, which cools the body while also removing impurities.
4) The hair follicles (where your hair is anchored) and oil glands, which generate the oil that softens and smoothes skin—sometimes too enthusiastically, leading in breakouts and greasiness—are also found in the dermis.

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C. The Subcutaneous Layer

1) The deepest layer of skin is this layer of fat, which connects your bones to your muscle and bones. It's so deep that your skin care products' active ingredients will never reach it. This layer is responsible for the following tasks:



2) The subcutaneous layer functions similarly to a thermostat. It protects the body and can also be used as a source of energy in a pinch.

3) Fat also acts as padding, protecting your muscles, bones, and organs from injury.

4) Finally, the subcutaneous layer contains additional blood vessels, nerve endings, hair follicle roots, and the deepest oil-producing sebaceous glands.

IX. CONCLUSION

People today require a cure for their problems that is free of adverse effects. Herbal components made it possible to create cosmetics with no side effects. Herbal face wash are thought to be a long - lasting and effective techniques to improve skin appearance. As a result, the current effort is an excellent attempt to manufacture a herbal face wash using naturally available substances such as aloe Vera, rose water, Raw honey, peppermint oil, almond oil, soap base and glycerin. The developed formulation was said to be Physico-chemically and microbiologically stable with charactertics similar to typical cosmoceutical formulation for cosmetic.

X. RESULT

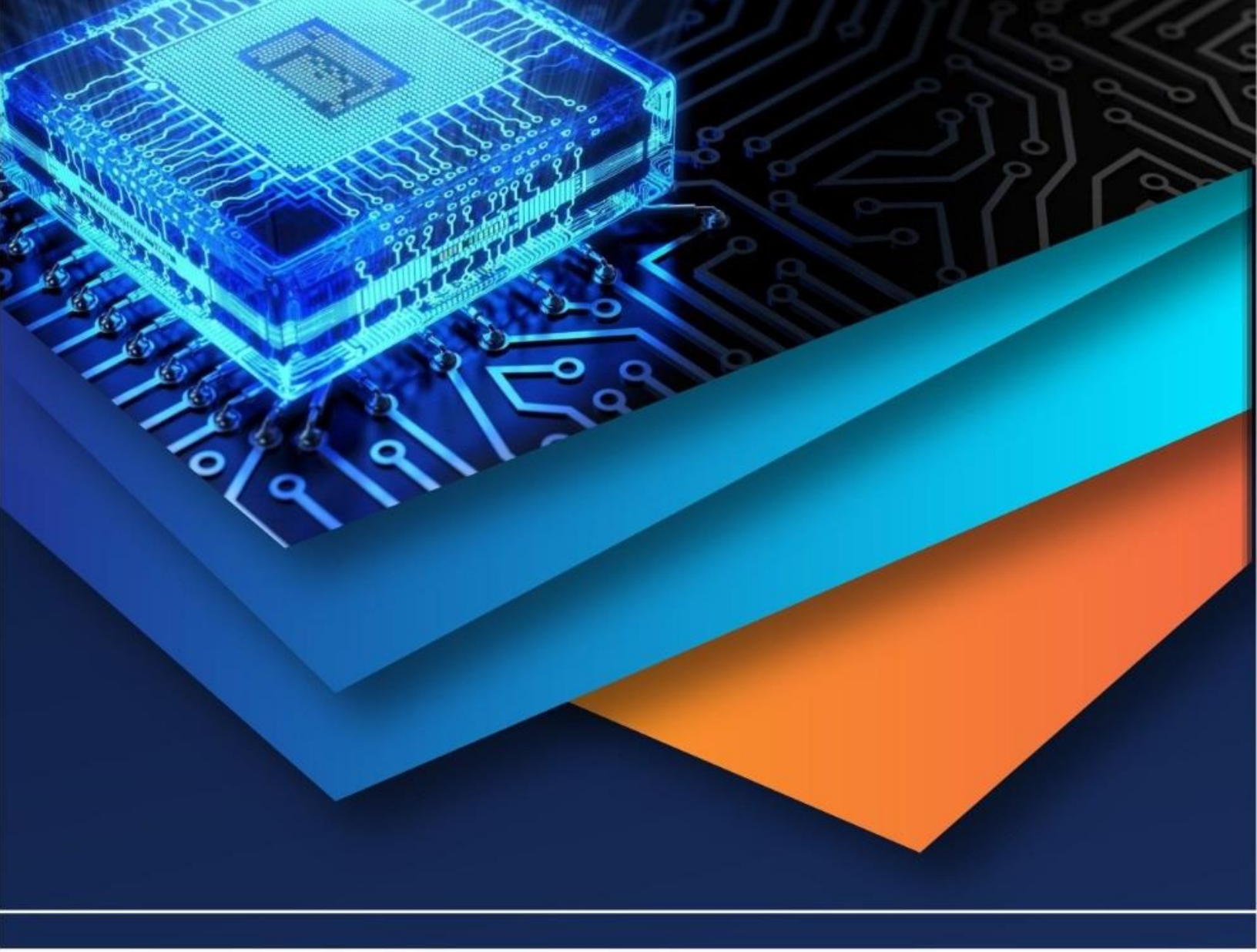
The formulation was found to be for the purpose of face wash Almond oil is a great natural source of vitamin E and it make skin smooth. The in vivo and in vitro evaluation finding revealed that the face wash to skin smooth. The prepared face wash contains all the goodness of natural ingredient.Aloe vera is used as antioxidants impact that can aid the repair of UV damage and slowing down of skin ageing process Peppermint oil antimicrobial and antiseptic properties aid the reduction of pimples.

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